CLAIMS

What Is Claimed Is:

1. A method for supplying ink from a main tank to sub-tanks in a printing device which executes printing by ejecting ink from nozzles onto a printing medium, the printing device comprising:

a plurality of nozzles for ejecting ink drops;

a first sub-tank which is provided at a high position relative to a second sub-tank and which holds ink to be supplied to one part of the plurality of the nozzles;

the second sub-tank which is provided at a low position relative to the first sub-tank and which holds ink to be supplied to another part of the plurality of the nozzles; and

a main tank which is connected to the first and second sub-tanks and holds ink to be supplied to the first and second sub-tanks;

the method including:

supplying ink from the main tank to the first sub-tank at a first pressure that is high relative to a second pressure at an ink supplying line used for ink supply to both the first and second sub-tanks; and

supplying ink from the main tank to the second sub-tank at the second pressure that is low relative to the first pressure at the ink supplying line.

2. The method according to Claim 1, wherein

the first pressure is set such that ink does not seep out from the nozzle when ink is supplied from the main tank to the first sub-tank in a situation that ink can be supplied from the first sub-tank to an opening of the nozzle;

the second pressure is set such that ink does not seep out from the nozzle when ink is supplied from the main tank to the second sub-tank in a situation that ink can be supplied from the second sub-tank to an opening of the nozzle.

3. The method according to Claim 1, wherein

the printing device further includes a carriage which reciprocates at a position where the carriage faces a printing medium, and

the plurality of the nozzles and the first and second sub-tanks are provided on the carriage.

4. The method according to Claim 1, wherein

the printing device further includes a plurality of the first sub-tanks, wherein the method further comprises:

determining whether the remaining amount of ink is below a threshold level in the plurality of first sub-tanks, and

supplying ink simultaneously from the main tank to one or more first sub-tanks of which the remaining amount of ink is below the threshold, where

ink is supplied from the main tank in a relatively high amount of ink per unit time when the ink is supplied simultaneously to a relatively large number of first sub-tanks; and

ink is supplied from the main tank in a relatively low amount of ink per unit time when the ink is simultaneously supplied to a relatively small number of first sub-tanks.

5. The method according to Claim 1, wherein

the printing device further includes a plurality of the first sub-tanks, wherein the method further comprises:

determining whether the remaining amount of ink is below a threshold level in the plurality of first sub-tanks, and

supplying ink simultaneously from the main tank to one or more first sub-tanks of which the remaining amount of ink is below the threshold, where

ink is supplied from the main tank at the first pressure when ink is supplied simultaneously to a relatively small number of first sub-tanks; and

ink is supplied from the main tank at a pressure higher than the first pressure when the ink is simultaneously supplied to a relatively large number of first sub-tanks.

6. The method according to Claim 1, wherein

the printing device further includes a plurality of the second sub-tanks, wherein the method further comprises:

determining whether the remaining amount of ink is below a threshold level in the plurality of second sub-tanks, and

supplying ink simultaneously from the main tank to one or more second sub-tanks of which the remaining amount of ink is below the threshold, where

ink is supplied from the main tank in a relatively high amount of ink per unit time when ink is supplied simultaneously to a relatively large number of second sub-tanks; and

ink is supplied from the main tank in a relatively low amount of ink per unit time when the ink is

simultaneously supplied to a relatively small number of second sub-tanks.

7. The method according to Claim 1, wherein

the printing device further includes a plurality of the second sub-tanks, wherein the method further comprises:

determining whether the remaining amount of ink is below a threshold level in the plurality of second sub-tanks, and

supplying ink simultaneously from the main tank to one or more second sub-tanks of which the remaining amount of ink is below the threshold, where

ink is supplied from the main tank at the second pressure when ink is supplied simultaneously to a relatively large number of second sub-tanks; and

ink is supplied from the main tank at a pressure lower than the second pressure when the ink is simultaneously supplied to a relatively small number of second sub-tanks.

8. A printing apparatus for printing by ejecting ink from nozzles onto a printing medium, comprising:

a plurality of nozzles for ejecting ink drops;

a first sub-tank which is provided at a high position relative to a second sub-tank and which holds ink to be supplied to one part of the plurality of the nozzles;

the second sub-tank which is provided at a low position relative to the first sub-tank and which holds ink to be supplied to another part of the plurality of the nozzles;

a main tank which is connected to the first and second sub-tanks and holds ink to be supplied to the first and second sub-tanks;

an ink supplying line which is used for supplying ink to both the first and second sub-tanks; and

an ink replenishment unit for supplying ink from the main tank to the first and second sub-tanks selectively,

wherein the ink replenishment unit is operable to supply ink from the main tank to the first sub-tank at a first pressure that is high relative to a second pressure at an ink supplying line used for ink supply to both the first and second sub-tanks; and

supply ink from the main tank to the second sub-tank at the second pressure that is low relative to the first pressure at the ink supplying line.

9. The printing apparatus according to Claim 8, wherein

the first pressure is set such that ink does not seep out from the nozzle when ink is supplied from the main tank to the first sub-tank in a situation that ink can be supplied from the first sub-tank to an opening of the nozzle;

the second pressure is set such that ink does not seep out from the nozzle when ink is supplied from the main tank to the second sub-tank in a situation that ink can be supplied from the second sub-tank to an opening of the nozzle.

10. The printing apparatus according to Claim 8, further comprising a carriage which reciprocates at a

position where the carriage faces a printing medium, wherein

the plurality of the nozzles and the first and second sub-tanks are provided on the carriage.

11. A computer product operable to control ink supply from a main tank to sub-tanks of a printing device, the printing device comprising:

a plurality of nozzles for ejecting ink drops;

a first sub-tank which is provided at a high position relative to a second sub-tank and which holds ink to be supplied to one part of the plurality of the nozzles;

the second sub-tank which is provided at a low position relative to the first sub-tank and which holds ink to be supplied to another part of the plurality of the nozzles;

a main tank which is connected to the first and second sub-tanks and holds ink to be supplied to the first and second sub-tanks;

wherein the computer product comprises:

a computer readable medium; and

a computer program stored on the computer readable medium, the computer program comprising:

instructions operable to control supply of ink from the main tank to the first sub-tank at a first pressure that is relatively high at an ink supplying line used for ink supply to both the first and second sub-tanks; and

instructions operable to control supply of ink from the main tank to the second sub-tank at a second pressure that is relatively low at the ink supplying line.

12. The computer program product according to Claim 11, wherein

the first pressure is set such that ink does not seep out from the nozzle when ink is supplied from the main tank to the first sub-tank in a situation that ink can be supplied from the first sub-tank to an opening of the nozzle;

the second pressure is set such that ink does not seep out from the nozzle when ink is supplied from the main tank to the second sub-tank in a situation that ink can be supplied from the second sub-tank to an opening of the nozzle.